

CHAPTER 7-03.1-09 **MILK AND MILK PRODUCTS STANDARDS OF IDENTITY AND QUALITY**

Section

7-03.1-09-01	Chemical, Physical, Bacteriological, and Temperature Standards
7-03.1-09-02	Enforcement Procedures

7-03.1-09-01. Chemical, physical, bacteriological, and temperature standards. The following chemical, physical, bacteriological, and temperature standards apply to milk and milk products standards of identity and quality, and at a minimum must meet the standards established by the United States department of agriculture and the pasturized milk ordinance.

1. Commingled grade A raw milk for pasteurization	Temperature	Milk must be received and maintained not to exceed forty-five degrees Fahrenheit [7 degrees Celsius] while in storage.
	Bacterial limit	Not to exceed three hundred thousand per milliliter prior to pasteurization.
	Drugs	Not to equal or exceed sixteen millimeter zone with the Bacillus Sterothermophilus disc assay method or a positive confirmation on a food and drug administration approved test.
2. Grade A pasteurized milk and milk products	Temperature	Cooled to forty-five degrees Fahrenheit [7 degrees Celsius] or less and maintained thereat.
	Bacterial limit	Twenty thousand per milliliter.
	Coliform	Not to exceed ten per milliliter, provided that, in the case of bulk milk transport tank shipments, it shall not exceed one hundred per milliliter.
	Phosphatase	Less than one microgram per milliliter by the Scharer Rapid Method or equivalent.

	Drugs	No zone greater than or equal to sixteen millimeters with the Bacillus Sterothermophilus disc assay method or a positive confirmatory on a food and drug administration approved test.
3. Grade A pasteurized condensed milk	Temperature	Cooled to forty-five degrees Fahrenheit [7 degrees Celsius] or less and maintained at that level unless drying is commenced immediately after condensing.
	Bacterial limit	Not to exceed thirty thousand per gram.
	Coliform limit	Not to exceed ten per gram.
	Drugs	No zone greater than or equal to sixteen millimeters with the Bacillus Sterothermophilus disc assay method or a positive confirmatory on a food and drug administration approved test.
	Phosphatase	Less than one microgram per milliliter by the Scharer Rapid Method or equivalent.
4. Grade A nonfat dry milk	Not more than:	
	Butterfat	One and twenty-five-hundredths percent.
	Moisture	Four percent.
	Titratable acidity	Fifteen-hundredths percent.
	Solubility index	One and twenty-five-hundredths milliliters.
	Bacterial estimate	Thirty thousand per gram.
	Coliform	Ten per gram.
	Scorched particles disc B	Fifteen per gram.
	Drugs	No zone greater than or equal to sixteen millimeters with the Bacillus Sterothermophilus disc assay method or a positive confirmatory on a food and drug administration approved

test.

5. Grade A whey
for condensing

Temperature Maintained at a
temperature of forty-five
degrees Fahrenheit
[7 degrees Celsius] or
less, or one hundred
forty-five degrees
Fahrenheit [63 degrees
Celsius] or greater
except for acid-type whey
with a titratable acidity
of forty-hundredths
percent or above or a
pH of four and sixty-
hundredths or below.

Drugs No zone greater than
or equal to sixteen
millimeters with the
Bacillus Sterothermophilus
disc assay method or a
positive confirmatory
on a food and drug
administration approved
test.

6. Grade A
pasteurized
condensed whey

Temperature Cooled to forty-five
degrees Fahrenheit
[7 degrees Celsius] or less
during crystallization,
within eighteen hours of
condensing.

Bacterial limit Not to exceed thirty
thousand per gram.

Coliform limit Not to exceed ten per
gram.

Drugs No zone greater than
or equal to sixteen
millimeters with the
Bacillus Sterothermophilus
disc assay method or a
positive confirmatory
on a food and drug
administration approved
test.

Phosphatase Less than one microgram
per milliliter by the
Scharer Rapid Method or
equivalent.

7. Grade A
dry whey

Bacterial limit Not to exceed thirty
thousand per gram.

Coliform limit Not to exceed ten per

gram.

	Drugs	No zone greater than or equal to sixteen millimeters with the Bacillus Sterothermophilus disc assay method or a positive confirmatory on a food and drug administration approved test.
8. US Extra grade dry buttermilk	Bacterial estimate . .	Not more than fifty thousand per gram.
	Butterfat	Not less than four and fifty-hundredths percent.
	Moisture	Not more than four percent.
	Scorched particle content	Not more than fifteen milligrams for the spray process and twenty-two and fifty-hundredths milligrams for the roller process.
	Solubility index . . .	Not more than one and twenty-five hundredths milliliters for the spray process and fifteen milliliters for the roller process.
	Titratable acidity . .	Not less than ten-hundredths percent; not more than eighteen-hundredths percent.
9. US Standard grade dry buttermilk	Bacterial estimate . .	Not more than two hundred thousand per gram.
	Butterfat	Not less than four and fifty-hundredths percent.
	Moisture	Not more than five percent.
	Scorched particle content	Not more than twenty-two and fifty-hundredths milligrams for the spray process and thirty-two and fifty-hundredths milligrams for the roller process.

	Solubility index . . .	Not more than two milliliters for the spray process and fifteen milliliters for the roller process.
	Titratable acidity . .	Not less than ten-hundredths percent; not more than twenty-hundredths percent.
10. US Extra grade whole milk	Bacterial estimate . .	Not more than fifty thousand per gram standard plate count.
	Coliform estimate . . .	Not more than ten per gram.
	Milkfat	Not less than twenty-six percent, but not greater than forty percent.
	Moisture	Not more than four and fifty-hundredths percent (as determined by weight of moisture on a milk solids not fat basis).
	Scorched particle content	Not more than fifteen milligrams for spray process and twenty-two and fifty-hundredths milligrams for roller process.
	Solubility index . . .	Not more than one milliliter for spray process, and fifteen milliliters for roller process.
11. US Standard grade dry whole milk	Bacterial estimate . .	Not more than one hundred thousand per gram standard plate.
	Coliform estimate . . .	Not more than ten per gram.
	Milkfat	Not less than twenty-six percent, but not greater than forty percent.
	Moisture	Not more than five percent (as determined by weight of moisture on a milk solids not fat basis).
	Scorched particle content	Not more than twenty-two

		and fifty-hundredths milligrams for spray process and thirty-two and fifty-hundredths milligrams for roller process.
	Solubility index . . .	Not more than one and fifty-hundredths millimeters for spray process, and fifteen milliliters for roller process.
12. US Extra grade fat dry milk (Roller Process)	Bacterial estimate . .	Not more than fifty thousand per gram standard plate count.
	Butterfat	Not more than one and twenty-five-hundredths percent.
	Moisture	Not more than four percent.
	Scorched particle content	Not more than twenty-two and fifty-hundredths milligrams.
	Solubility index . . .	Not more than fifteen milliliters.
	Titratable acidity . .	Not more than fifteen- hundredths percent.
13. US Standard grade nonfat dry milk (Roller Process)	Bacterial estimate . .	Not more than one hundred thousand per gram standard plate count.
	Butterfat	Not more than one and fifty-hundredths percent.
	Moisture	Not more than five percent.
	Scorched particle content	Not more than thirty-two and fifty-hundredths milligrams.
	Solubility index . . .	Not more than fifteen milliliters.
	Titratable acidity . .	Not more than seventeen- hundredths percent.
14. US Extra grade instant nonfat dry milk	Bacterial estimate . .	Not more than thirty thousand per gram standard plate count.

	Coliform count	Not more than ten per gram.
	Milkfat	Not more than one and twenty-five-hundredths percent.
	Moisture	Not more than four and fifty-hundredths percent.
	Scorched particle content	Not more than fifteen milligrams.
	Solubility index . . .	Not more than one milliliters.
	Titratable acidity . .	Not more than fifteen-hundredths percent.
	Dispersibility	Not less than eighty-five percent.
15. US Extra grade fat dry milk (Spray Process)	Bacterial estimate . .	Not more than fifty thousand per gram standard plate count.
	Butterfat	Not more than one and twenty-five-hundredths percent.
	Moisture	Not more than four percent.
	Scorched particle content	Not more than fifteen milligrams.
	Solubility index . . .	Not more than one and twenty-hundredths milliliters except that product classified as US High Heat may have more than two milliliters.
	Titratable acidity . .	Not more than fifteen-hundredths percent.
16. US Standard grade nonfat dry milk (Spray Process)	Bacterial estimate . .	Not more than one hundred thousand per gram standard plate count.
	Butterfat	Not more than one and fifty-hundredths percent.
	Moisture	Not more than five percent.
	Scorched particle content	Not more than twenty-two and fifty-hundredths

milligrams.

	Solubility index . . .	Not more than two milliliters except that product classified as US High Heat may have not more than two and fifty-hundredths milliliters.
	Titratable acidity . .	Not more than seventeen-hundredths percent.
17. US Extra grade dry whey	Bacterial estimate . .	Not more than fifty thousand per gram standard plate count.
	Coliform	Not more than ten per gram.
	Milkfat	Not more than one and fifty-hundredths percent.
	Moisture	Not more than five percent.
18. Butter	Proteolytic count	not more than one hundred per gram.
	Yeast and mold	not more than twenty per gram.
	Coliform count	not more than ten per gram.
19. Whipped butter	Proteolytic count	not more than one hundred per gram.
	Yeast and mold	not more than twenty per gram.
	Coliform count	not more than ten per gram. Eterococci not more than ten per gram.

Requests for standards of identity of products not previously defined, must be made in writing to the dairy commissioner who is responsible for developing the standards of identity for the product in question.

History: Effective August 1, 1986; amended effective April 1, 1993.

General Authority: NDCC 4-29-03, 4-29-04, 4-30-55.1

Law Implemented: NDCC 4-30-35, 4-30-36

7-03.1-09-02. Enforcement procedures.

1. Whenever three of the last five consecutive bacteria, temperature, or coliform counts exceed the standards of the pasteurized milk ordinance or United States department of agriculture, immediate suspension of the permit for the plant processing the product in violation will occur.
2. Whenever any phosphatase test is positive, an investigation to determine the cause must be made by the dairy commissioner and the product in question may not be offered for sale until the investigation determines the cause of the problem.
3. Whenever any drug or pesticide test results in a level exceeding the limits established by the food and drug administration or environmental

protection agency, the product in question must be removed from the market and an investigation to determine the cause of the problem must be made by the dairy commissioner. The milk product in question may not be offered for sale until the cause of the problem has been determined.

4. Raw milk cheese is not permitted to be processed or sold in North Dakota. All milk to be used for cheese processing must be heat treated or pasteurized: Heat treating at one hundred forty-seven degrees Fahrenheit [63.89 degrees Celsius] for twenty-one seconds; one hundred fifty-three degrees Fahrenheit [67.22 degrees Celsius] for fifteen seconds.

History: Effective August 1, 1986; amended effective April 1, 1993.

General Authority: NDCC 4-29-03, 4-29-04, 4-30-55.1

Law Implemented: NDCC 4-30-35, 4-30-36, 4-30-56